In the Claims:

1.   (Amended Three Times) A method of processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, comprising the steps of:

receiving data samples from the plurality of traffic channels and the plurality of pilot channels;

correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;

forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

scaling the pilot despread values by the scale factors to form scaled pilot despread values;

estimating channel responses using the scaled pilot despread values to produce channel coefficient estimates;

combining the traffic despread values, using the channel coefficient estimates, to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels.

Please cancel Claim 4.

6.   (Amended Two Times) A method of processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, comprising the steps of:

receiving data samples from the plurality of traffic channels and the plurality of pilot channels;

correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;

forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

scaling the pilot despread values by the scale factors to form scaled pilot despread values;

estimating channel responses using the scaled pilot despread values to produce channel coefficient estimates;

combining the traffic despread values, using the channel coefficient estimates, to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

wherein the step of forming scale factors comprises the steps of:

forming an error signal using the pilot channel despread values and the traffic channel despread values; and

computing a scale factor based on the error signal.

12.   (Amended Three Times) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:

means for receiving data samples from the plurality of traffic channels and the plurality of pilot channels;

means for correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;

means for forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

means for scaling the pilot despread values by the scale factors to form scaled pilot despread values;

means for estimating channel responses using the scaled pilot despread values to produce channel coefficient estimates;

means for combining the traffic despread values, using the channel coefficient estimates, to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels.

Please cancel Claim 13.

16.   (Amended Three Times) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:

means for receiving data samples from the plurality of traffic channels and the plurality of pilot channels;

means for correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;

means for forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

means for scaling the pilot despread values by the scale factors to form scaled pilot despread values;

means for estimating channel responses using the scaled pilot despread values to produce channel coefficient estimates;

means for combining the traffic despread values, using the channel coefficient estimates, to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

wherein the means for forming scale factors comprises:

means for estimating power on a pilot channel;

means for estimating power on a traffic channel; and

means for determining scale factors based upon the estimated powers on the pilot channel and the traffic channel.

23.   (Amended Three Times) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:

a receiver that receives data samples from the plurality of traffic channels and the plurality of pilot channels;

a correlator that correlates the received data samples to spreading codes to produce pilot despread values and traffic despread values;

a scale factor estimator that estimates scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

a scaler that scales the pilot despread values by the scale factors to form scaled pilot despread values;

a channel coefficient estimator that estimates channel responses using the scaled pilot despread values to produce channel coefficient estimates;

a combiner that combines the traffic despread values, using the channel coefficient estimates, to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels.

Please cancel Claim 26.

28. (Amended Three Times) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:

a receiver that receives data samples from the plurality of traffic channels and the plurality of pilot channels;

a correlator that correlates the received data samples to spreading codes to produce pilot despread values and traffic despread values;

a scale factor estimator that estimates scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

a scaler that scales the pilot despread values by the scale factors to form scaled pilot despread values;

a channel coefficient estimator that estimates channel responses using the scaled pilot despread values to produce channel coefficient estimates;

a combiner that combines the traffic despread values, using the channel coefficient estimates, to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels; and

an error signal generator that is responsive to the pilot channel despread values and the traffic channel despread values.

34. (Once Amended) A method of processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, comprising the steps of:

receiving data samples from the plurality of traffic channels and the plurality of pilot channels;

correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;

forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

scaling the pilot despread values by the scale factors to form scaled pilot despread values;

estimating channel responses using the scaled pilot despread values to produce channel coefficient estimates;

combining the traffic despread values, using the channel coefficient estimates, to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

wherein the step of forming scale factors comprises the steps of:

estimating power on a pilot channel;

estimating power on a traffic channel;

dividing the estimated power on the traffic channel by the estimated power on the pilot channel to produce a power ratio; and

obtaining a square root of the power ratio to produce the scale factor.

36. (Once Amended) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:

means for receiving data samples from the plurality of traffic channels and the plurality of pilot channels;

means for correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;

means for forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

means for scaling the pilot despread values by the scale factors to form scaled pilot despread values;

means for estimating channel responses using the scaled pilot despread values to produce channel coefficient estimates;

means for combining the traffic despread values, using the channel coefficient estimates, to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

wherein the means for forming scale factors comprises:

means for estimating power on a pilot channel;

means for estimating power on a traffic channel;

means for dividing the estimated power on the traffic channel by the estimated power on the pilot channel to produce a power ratio; and

means for obtaining a square root of the power ratio to produce the scale factor.

7 38. (Once Amended) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:

a receiver that receives data samples from the plurality of traffic channels and the plurality of pilot channels;

a correlator that correlates the received data samples to spreading codes to produce pilot despread values and traffic despread values;

a scale factor estimator that estimates scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

a scaler that scales the pilot despread values by the scale factors to form scaled pilot despread values;

a channel coefficient estimator that estimates channel responses using the scaled pilot despread values to produce channel coefficient estimates;

a combiner that combines the traffic despread values, using the channel coefficient estimates, to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

wherein the scale factor estimator comprises:

a pilot channel power estimator;

a traffic channel power estimator;

a divider that is responsive to the pilot channel power estimator and to the traffic channel power estimator; and

a square root calculator that is responsive to the divider.

39. (Once Amended) A system according to Claim 38 wherein the traffic channel power estimator comprises an equivalent full rate power traffic channel estimator.